

## Instructional Procedures Involving Community Members

To give students the broadest educational experience possible, guest lecturers are invited to the campus to share their expertise with students and staff. Because of their close tie with the agricultural industry, these people give students an excellent insight into the world of work.

The University of Minnesota Technical College, Waseca, uses the resources of agricultural business and industry to help meet students needs. Many area agricultural businessmen, farmers, and others involved in the agricultural industry have opened their doors to UMW students. This allows the students to learn by observing. These off-campus industry-related laboratories provide excellent learning experiences for students.

The Pre-Occupational Preparation Program (POP) is a vital and significant part of each student's college experience. All students are required to take the twelve week on-the-job training program as a prerequisite for graduation. Employers and supervisors work closely with the college to provide a meaningful work experience for the students. More than 200 agricultural industries, businesses, and home farms served as POP stations in 1982-83.

### Other Community Relationships

There are many other examples of community support and involvement in addition to these previously outlined in this paper. Some of these are financial support such as scholarships, loans and development funds; some are instructional materials; and some are athletic team support groups. The overall support body is the South Central Education Association. This organization promotes, supports and assists in the development and advancement of technical agricultural education through UMW.

### Conclusion

The University of Minnesota Technical College, Waseca is primarily a teaching institution. Good relationship with the people of the community and area has facilitated this teaching function to effectively carry out the single mission in agriculture.

With the strong area and community support there has been no hint of a "town-gown" complex in relationship to the Waseca post-secondary institution. Furthermore, it has been found that individuals working with the college in an instructional or advisory capacity become familiar with the school and its programs, and they develop a feeling of loyalty to the Technical College at Waseca. In addition, the monetary and non-monetary contributions of time and talent by community and area people become a significant factor in developing an excellent college.

The importance of bringing the college into the community and the community into the college is shown by the examples in this paper.

## Case Study

# Recent Ag Program Graduates Provide Valid Data Base For Programmatic Decisions

Herbert Schumann and James Casey

### Introduction

In this era of high technology, it is imperative that universities continually evaluate programs and curricula so that students will have access to education of the highest quality. There has been considerable disagreement among various authorities regarding programs in the university. Some (2, 3, and 4) have cited the critical shortage of professionally trained agricultural scientists. Others (1) have been less positive regarding the employment outlook for agricultural graduates.

The Department of Agriculture and Natural Resources at Sam Houston State University (SHSU) has experienced relatively stable enrollment over the past ten years. Recently, there have been commitments for new and expanded facilities to enhance departmental programs. However, these commitments are in part contingent upon recommendations regarding the future of the agricultural program at SHSU being developed by an external study team. It was imperative, therefore, that a follow-up study be conducted of recent agricultural graduates to obtain a more valid data base for programmatic decisions.

### Purpose and Objectives

The two-fold purpose of this study was to survey the employment status of recent graduates of the Department and to identify their perceptions regarding strengths and weaknesses of educational programs in the Department of Agriculture and Natural Resources at Sam Houston State University. Specific objectives were to:

1. Identify pertinent background information of the graduates.
2. Identify current employment status of graduates.
3. Survey current income levels of the graduates.
4. Estimate the perceived need for different courses necessary for success in careers of graduates.
5. Survey perceptions of graduates regarding facilities and instructional areas.
6. Determine, based on their experiences since graduation, if graduates would again major in agriculture at SHSU.

### Procedure

A complete list of all baccalaureate graduates in agriculture from 1975 to 1982 was obtained from the Registrar's office. These former students were con-

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tacted and asked to respond regarding their current status. They were asked also to participate in a departmental follow-up study. One hundred and twenty-five indicated a willingness to cooperate in a follow-up study.

In early January, 1983, a cover letter and questionnaire were mailed to each of these graduates. Subsequently, a follow-up letter, along with another questionnaire was mailed in an attempt to obtain additional returns. A final follow-up letter was mailed in late January to non-respondents, and by mid-February, 111 participants had responded, which represented an 88.8 percent return.

### Analysis of Data

#### Background Information

Of responses received, 86 percent were male and 14 percent were female, indicating the traditional male orientation of the department. Also, a majority of graduates (60%) indicated that they had a rural background.

More than one-half (68%) of graduates had FFA experience, and 36 percent had 4-H experience.

Almost half (45%) of respondents were agricultural education majors. The next highest percent were agricultural business majors, with 20 percent. Respondents in the other emphasis areas were animal science, 12 percent; general agriculture, nine percent; horticulture and crop science, eight percent; and agricultural mechanics, four percent.

Eighty-two percent of respondents earned only the baccalaureate degree, whereas 18 percent earned both baccalaureate and master's degrees.

As is typical in follow-up studies, the most recent graduates responded more readily than earlier graduates included in the study.

#### Occupational Status

Table I shows that over one-half of respondents were employed in agricultural occupations, with the largest number employed in public school systems as teachers of vocational agriculture. Of the 38 percent indicating employment in the non-agricultural sector, the majority were engaged in petro-chemical related occupations. Also, a number indicated employment in

**Table 1. A Survey of Current Occupations of Recent Graduates of the Department of Agriculture and Natural Resources, SHSU.**

Occupational Categories	Number	Percentage
Non-Agricultural Employment	47	38.5
Public School System (Agriculture Teacher)	26	21.3
Production Agriculture	25	20.5
Agribusiness	13	10.7
Unemployed	4	3.3
TOTAL	122*	100.0

\* This number exceeds the number of respondents since some checked more than one occupational category.

industrial areas such as construction and welding. Several reported that they were full-time graduate students.

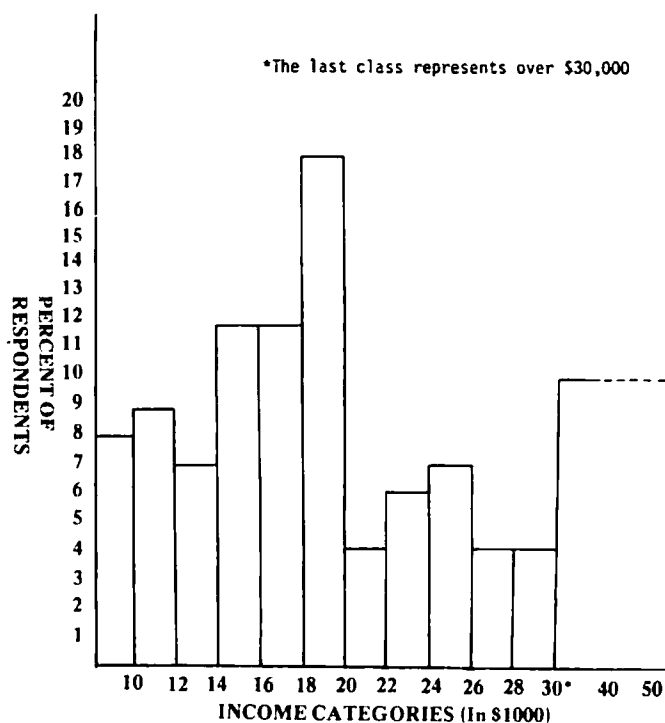
#### Salary Levels

Salary data were requested by program and categorical ranges. Figure I is a histogram depicting salary information gathered by the survey. The modal category is the range \$18,000 to \$20,000 annually. A greater proportion of respondents indicated salary levels less than the modal class than above. It may be noted that approximately one-half of those indicating annual incomes less than \$10,000 were full-time graduate students. Eleven respondents indicated salary levels in excess of \$30,000 annually.

#### Instructional Needs

A second objective of this study was to estimate instructional needs of the department based on impressions of graduates. A grid-type response area was presented in the questionnaire with emphasis areas matched to varying levels of instructional needs. A computer algorithm computed percentage responses for each cell in the grid. Table II shows results of this part of the study.

**Figure I. A Histogram of Varying Salary Levels of Recent Graduates in Agriculture and Natural Resources, SHSU.**



A pattern is readily observed in the section for Instruction. Both categories related to business administration revealed felt needs for increased instruction. Over 40 percent of all respondents checked business and/or agricultural business in this category. This is not an unexpected result, as agricultural economics currently is a very popular discipline at most universities offering agricultural courses. Ap-

proximately one of every three respondents also listed crop science and animal science for more instruction. Few respondents expressed a need for more biology, chemistry, English, and agricultural education instruction. The results in Table II seem to indicate a felt need for more instruction in the specialty areas and constant to less instruction in the traditional fields comprising university core requirements. However, 26 percent did indicate a need for more math instruction.

**Table 2. A Survey of Attitudes Toward Instruction in the Department of Agriculture and Natural Resources, SHSU.**

Courses	Needs More Instruction	Needs Less Instruction	Needs Met Adequately	Does Not Apply
Agricultural Education	13%	0%	52%	28%
Agricultural Business	46%	1%	40%	5%
Horticulture & Crop Science	31%	1%	56%	8%
Agricultural Mechanics	21%	1%	58%	12%
Animal Science	29%	3%	56%	5%
English	13%	11%	56%	8%
Business	41%	2%	36%	13%
Biology	11%	13%	63%	6%
Chemistry	13%	11%	63%	4%
Math	26%	4%	56%	5%

Considering that respondents are graduates who are pursuing professional careers, it must be assumed that they are aware of trends and needs in their areas of specialization. Results clearly indicated desire for more specialized training which may be philosophically controversial to some educators who emphasize more traditional core requirements.

#### Facilities and Improvements

Ideally, the department would like to have the best facilities and equipment for each of the disciplines; however, a limited budget for capital purchases prohibits such a situation. As an aid to the decision process for allocating existing monies among competing disciplines, this study polled former students regarding adequacies of facilities. Respondents were asked to rate facilities from poor to excellent. Table III shows the consensus of opinions from all graduates. Over three-fourths of respondents believed that facilities were good or fair. Perhaps this reflects an attitude that an adequate job is being done allocating scarce capital to fulfill needs of the various areas.

**Table 3. A Survey of Adequacies of all Facilities in the Department of Agriculture and Natural Resources, SHSU.**

	Excellent	Good	Fair	Poor
Consensus of All Graduates	15%	53%	26%	6%

Next, graduates were asked which areas of facilities and equipment needed improvement. As shown in Table IV, approximately a third or more of respondents indicated that improvements were needed in all areas. Over one-half (53%) indicated a need for improvements in the horticultural/crop science area.

**Table 4. A Survey of the Facilities Needing Improvement in the Department of Agriculture and Natural Resources, SHSU.**

Ag Business	Ag Mechanics	Animal Science	Horticulture/ Crop Science
32%	39%	40%	53%

#### Instruction

The response for instruction contrasts somewhat to those of facilities. In Table V, a majority of all responses are under categories favorable to teacher instruction. The consensus shows 26 percent felt instruction was excellent, 60 percent indicated good, and only 14 percent were in categories of fair or poor. Evidently, graduates generally were pleased with the instructional program in the department.

**Table 5. A Survey of Instructional Adequacies in the Department of Agriculture and Natural Resources, SHSU.**

	Excellent	Good	Fair	Poor
Consensus of All Graduates	26%	60%	12%	2%

#### Other Needs

Graduates also were asked which areas needed improvement including textbooks, labs, and lecture. Table VI shows again that the greatest felt need was for improvements in the laboratory in the horticulture/crop science areas. Also, approximately one-third of respondents indicated that improvements were needed in animal science and agricultural business areas. It may be noted that graduates generally indicated satisfaction with agricultural mechanics and agricultural education areas.

**Table 6. A Survey of Areas Needing Improvement in the Department of Agriculture and Natural Resources, SHSU.**

	Ag Business	Ag Education	Ag Mech	Animal Science	Hort/Crop
Textbook	18%	7%	8%	15%	13%
Lab	32%	NA	18%	34%	43%
Lecture	20%	7%	2%	10%	17%

#### Attitude Toward the Departmental Program

In order to obtain overall perceptions of graduates regarding the agricultural program at SHSU, graduates were asked "based on your experiences since graduation, would you major in Agriculture at SHSU again?" Table VII shows a strong favorable opinion of the education received with almost half indicating that they would definitely major in agriculture at SHSU again, while only four percent said no. This positive perception of their educational experiences also was affirmed by written comments.

**Table 7. A Survey of Recent Graduates Regarding if They Would Major in Agriculture at SHSU Again.**

	Definitely	Probably Yes	Probably No	No
All Graduates	47%	30%	18%	4%

## General Comments

In an open-ended format, graduates were afforded an opportunity to express their opinions regarding all of their experiences associated with SHSU.

The overwhelming tone of their comments regarding the education received in agriculture at SHSU was quite positive. Some representative comments were, "I think that SHSU has the best Ag program around and the best teachers;" "excellent rapport between students and faculty;" "I am very proud of having graduated from Sam."

Some concern was expressed in the area of placement services and employment opportunities in agriculture. Perhaps this reflects currently existing economic conditions.

Also, several respondents expressed a need for more computer usage and improved facilities, especially in horticulture. A significant number also indicated that more relevance was needed in agricultural courses, and that the academic rigor should be improved.

## Summary

This was a follow-up study of 111 graduates of the Department of Agriculture and Natural Resources at Sam Houston State University who graduated from 1975 to 1982. The purpose of the study was to determine pertinent background information of graduates and to survey their opinions regarding the education received at SHSU. The following conclusions were formulated from the survey:

1. The background of students was rather traditional - male, rural, and with an FFA/4-H background.
2. Almost half of respondents were agricultural education majors; however, agricultural business was experiencing increasing popularity.
3. The majority of respondents were employed in agricultural occupations with the largest number working as teachers of vocational agriculture. Only three percent were unemployed.
4. The modal salary ranged from \$18,000 to \$20,000 annually.
5. Graduates expressed a strong need for more business and/or agricultural business courses. They also felt that more instruction in other technical agricultural courses was needed. They felt that their needs were being met by existing offerings in the traditional fields comprising university core requirements.
6. Some concerns were expressed regarding facilities, particularly in the horticulture/crop science area.
7. The graduates generally felt highly favorable toward the adequacy of the instruction they received. This was particularly evident in

animal science and agricultural education.

8. The overall perceptions of graduates regarding the department at SHSU was quite positive with 74 percent indicating they would "definitely" or "probably" enroll in agriculture at SHSU again.

## Recommendations

The following recommendations are made based on the findings of the survey:

1. Curriculum changes be implemented emphasizing more business, agribusiness, and computer oriented skills.
2. Any changes in university curriculum requirements ensure that a strong base is maintained in specialized agricultural courses.
3. A program for the construction of new facilities be initiated immediately.
4. The faculty continue to strive to provide a high quality instructional program.
5. An on-going follow-up program be initiated to obtain data from graduates in order to make programmatic decisions.

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